

A-03070 FIGS. 1-16

FIG. 1

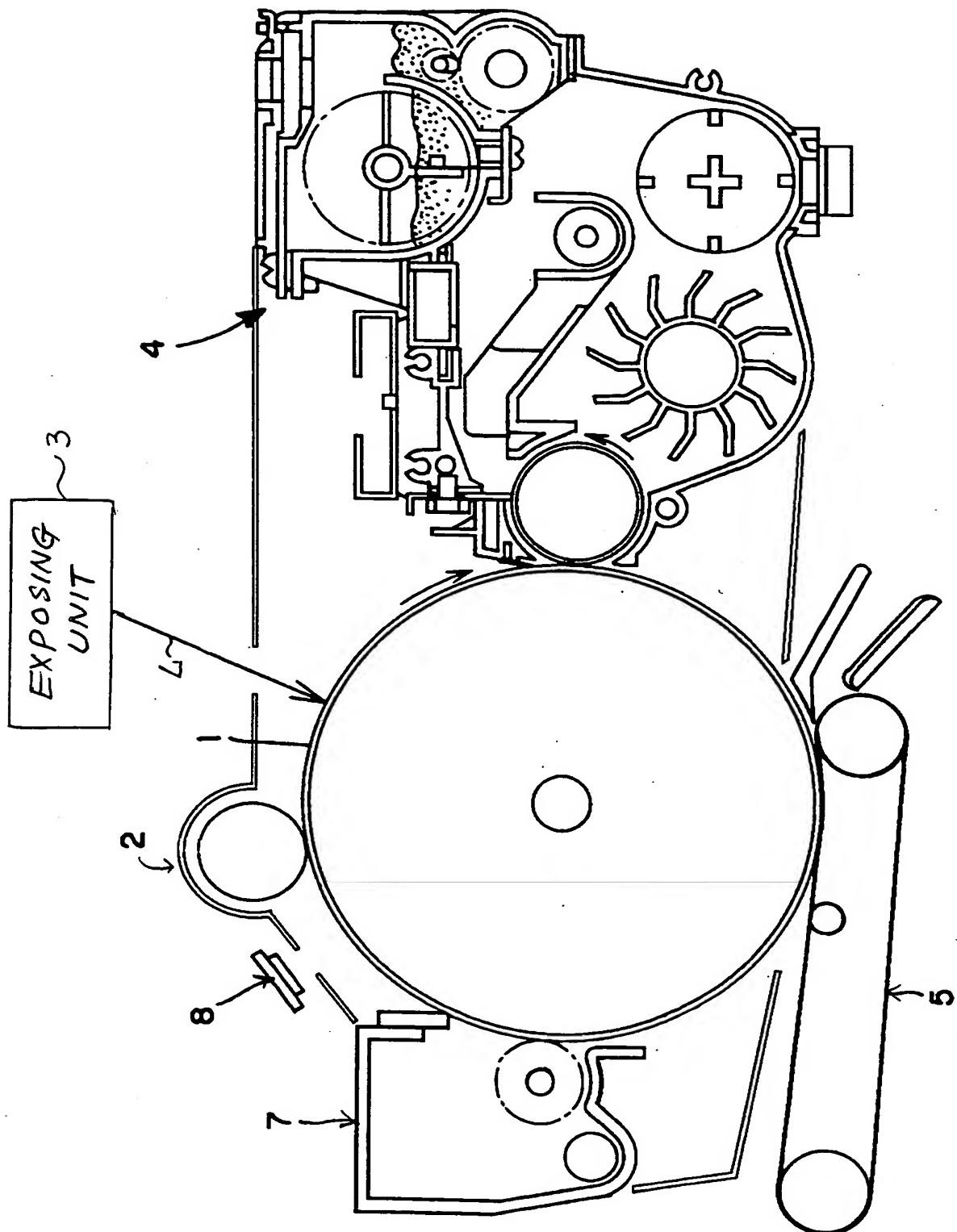


FIG. 2

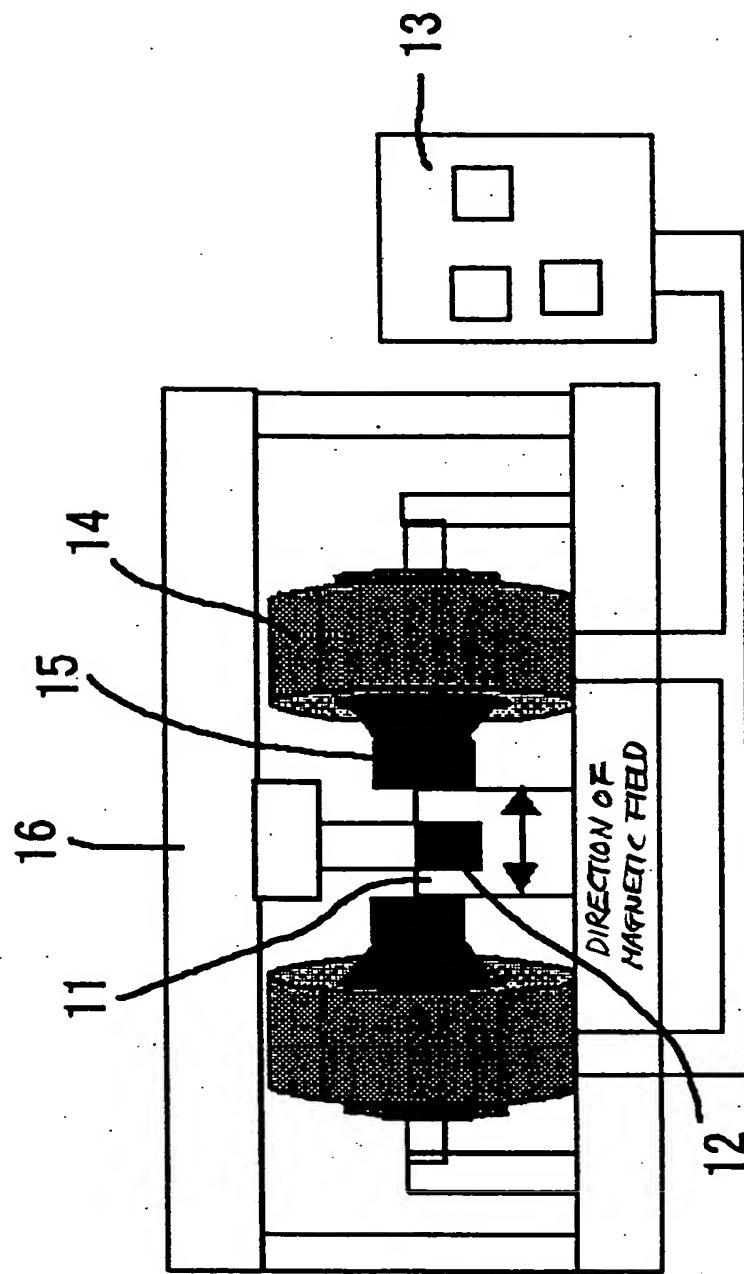


FIG. 3

Wt %	STOPPING	STRENGTH (BENDING STRENGTH)	BREAKAGE	TOTAL
0.08	occurred	12.0 kg/mm ²	NOT OCCURRED	X
0.1	occurred	11.0 kg/mm ²	NOT OCCURRED	X
0.3	NOT OCCURRED	10.4 kg/mm ²	NOT OCCURRED	O
0.5	NOT OCCURRED	8.5 kg/mm ²	NOT OCCURRED	O
0.8	NOT OCCURRED	7.0 kg/mm ²	NOT OCCURRED	O
1.0	NOT OCCURRED	5.0 kg/mm ²	OCCURRED	X

FIG. 4

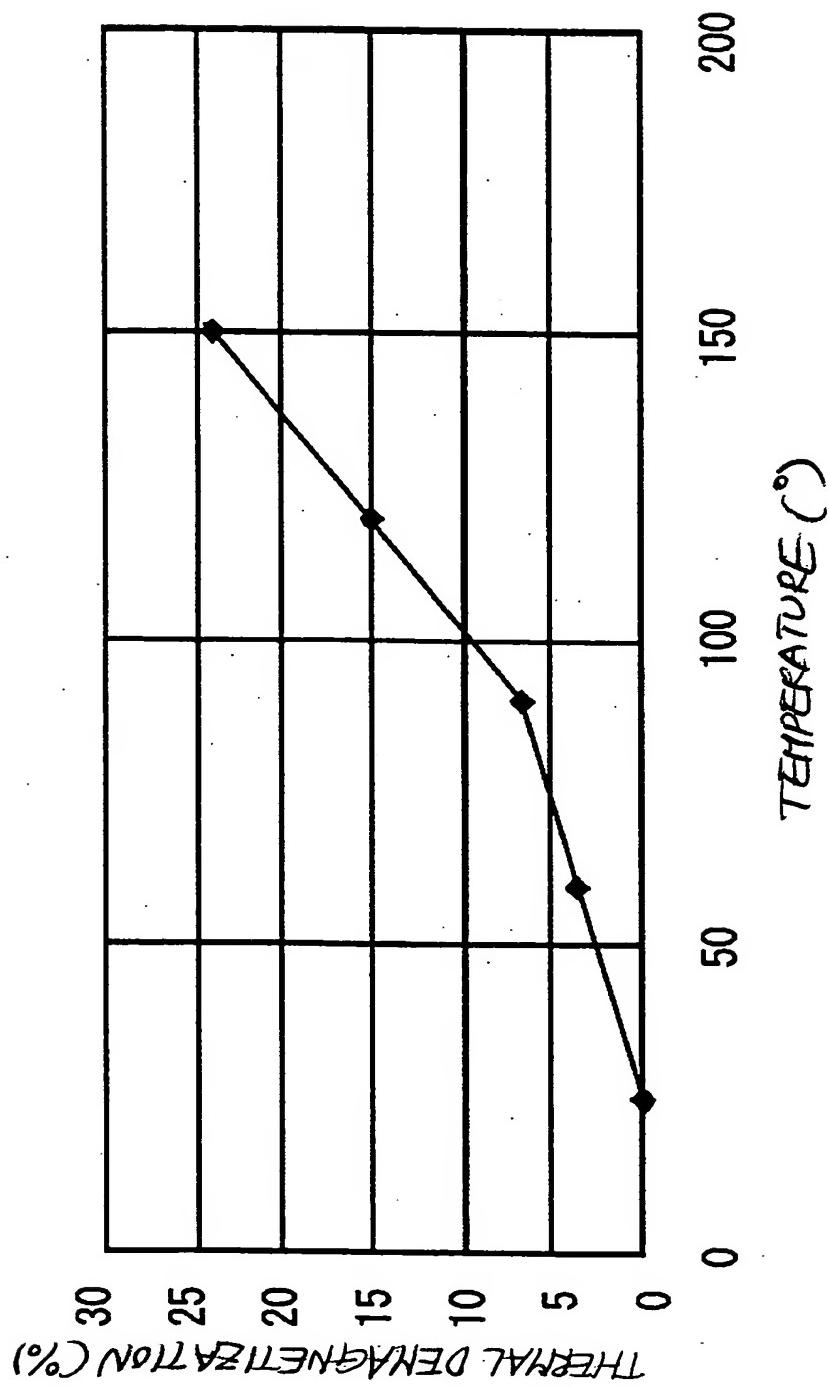


FIG. 5A

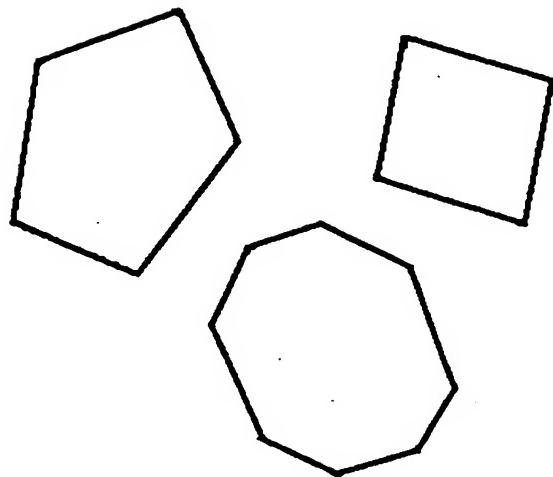
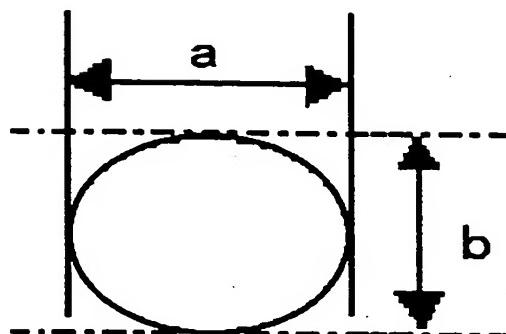


FIG. 5B



$$\text{CIRCULARITY} = b/a$$

FIG. 6A

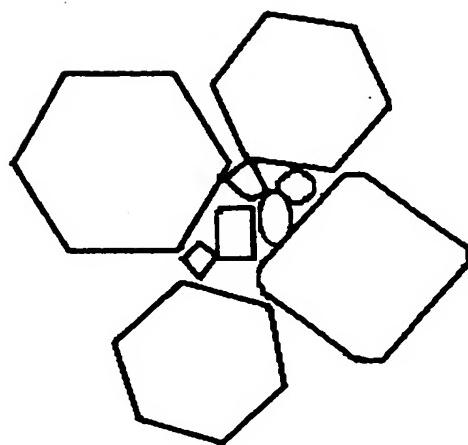
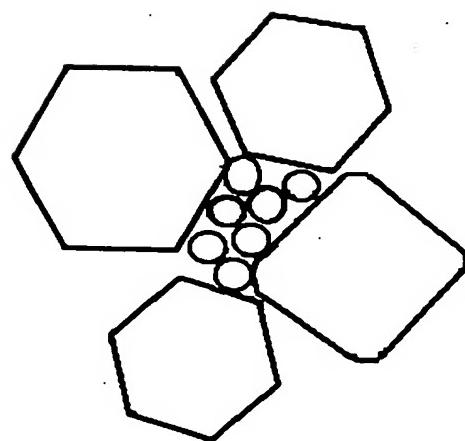


FIG. 6B



GRAINS WITH CIRCULARITY
OF 0.9 OR ABOVE

FIG. 7

DIFFERENT MOULDING METHODS FOR EPOXY
COMPOUND ANISOTROPIC Nd-Fe-B MAGNET

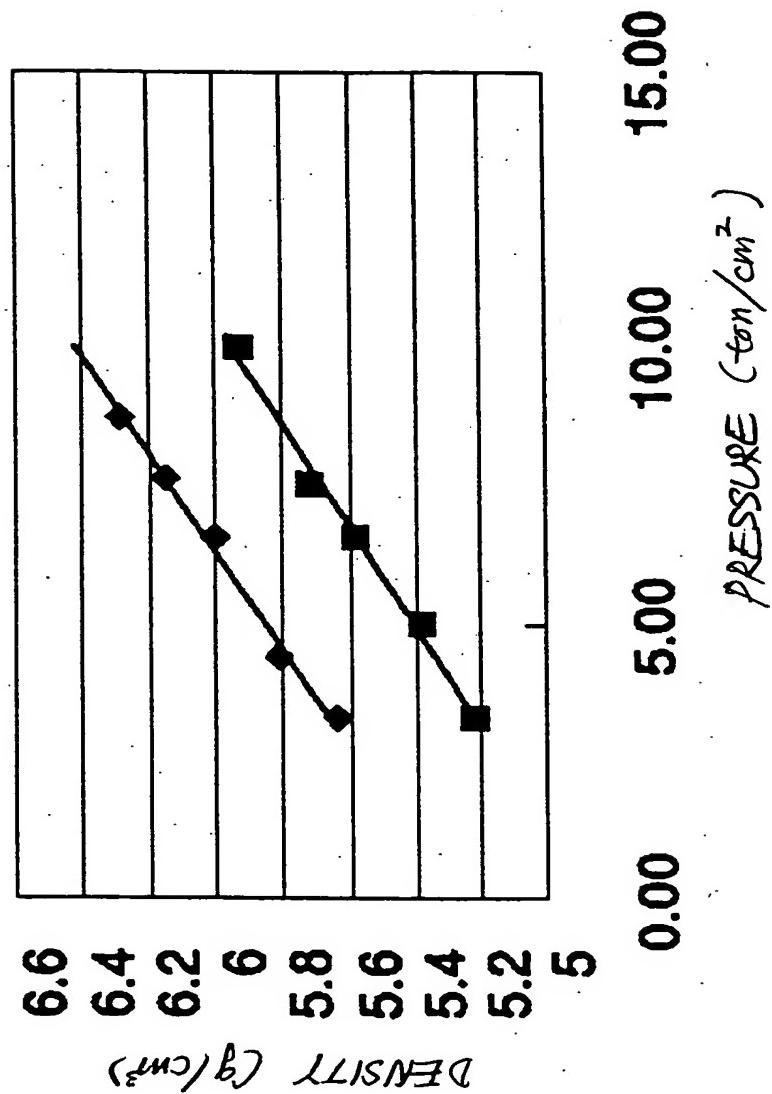


FIG. 8

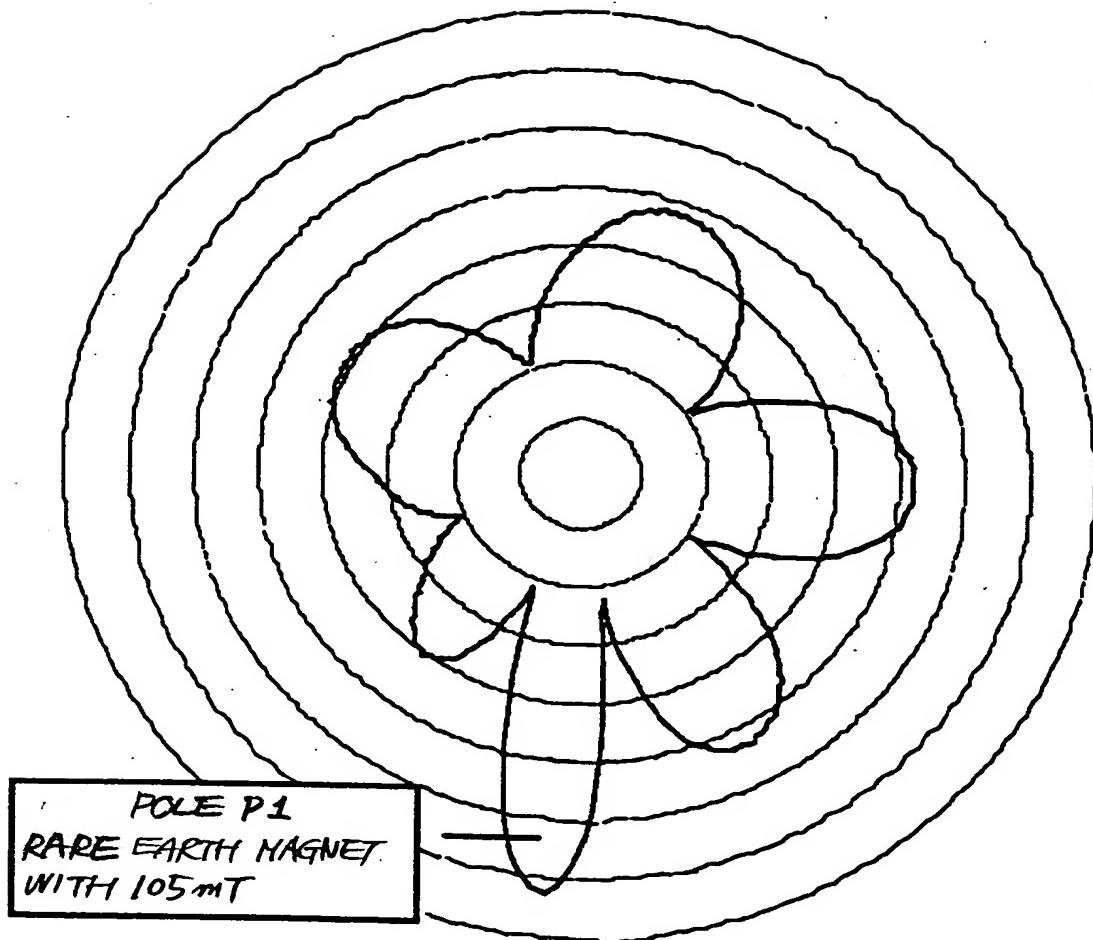


FIG. 9

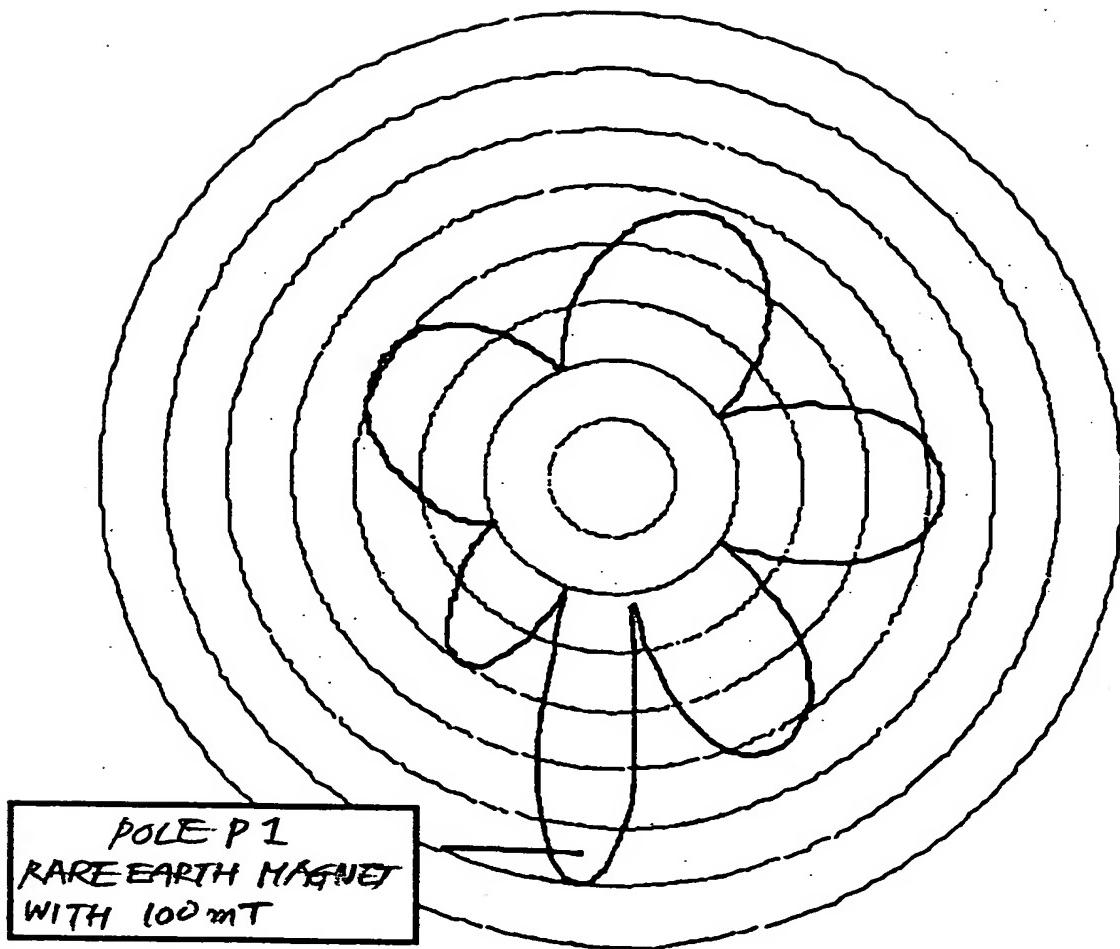


FIG. 10

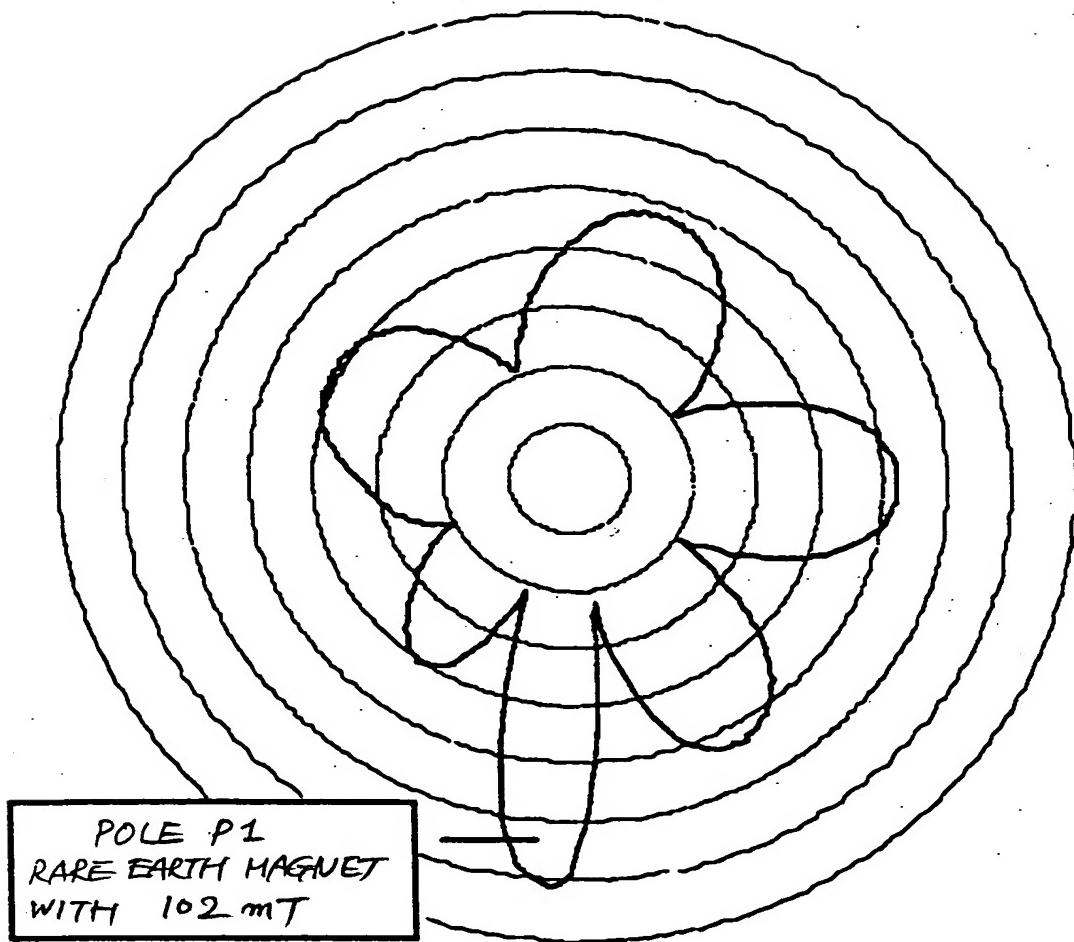


FIG. 11

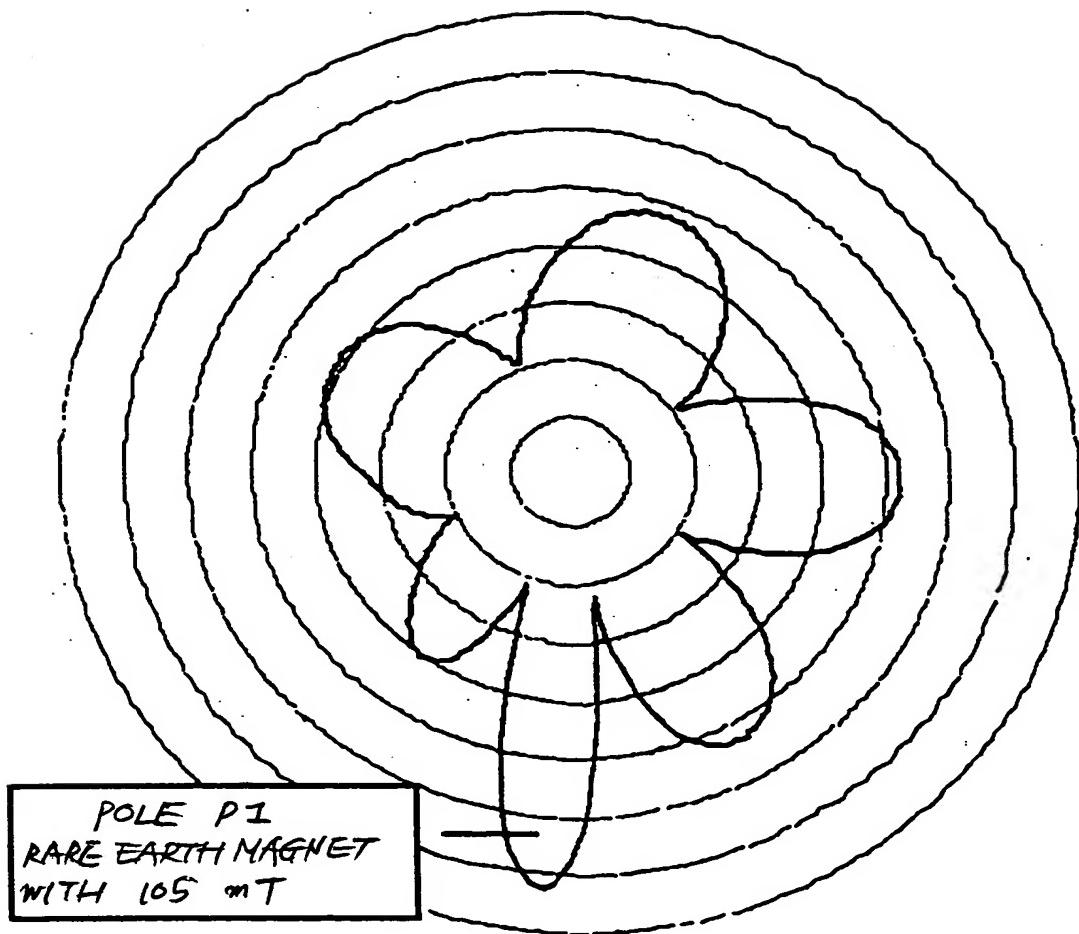


FIG. 12

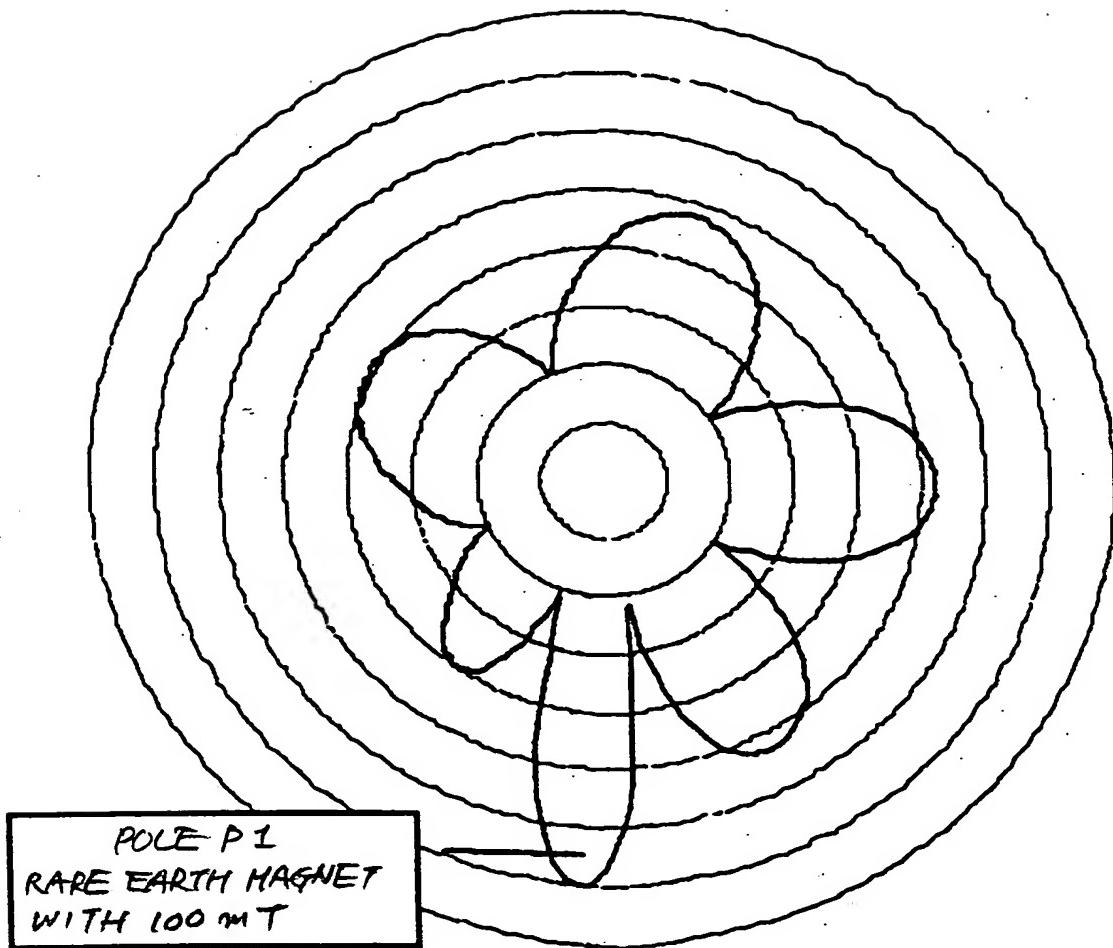


FIG. 13

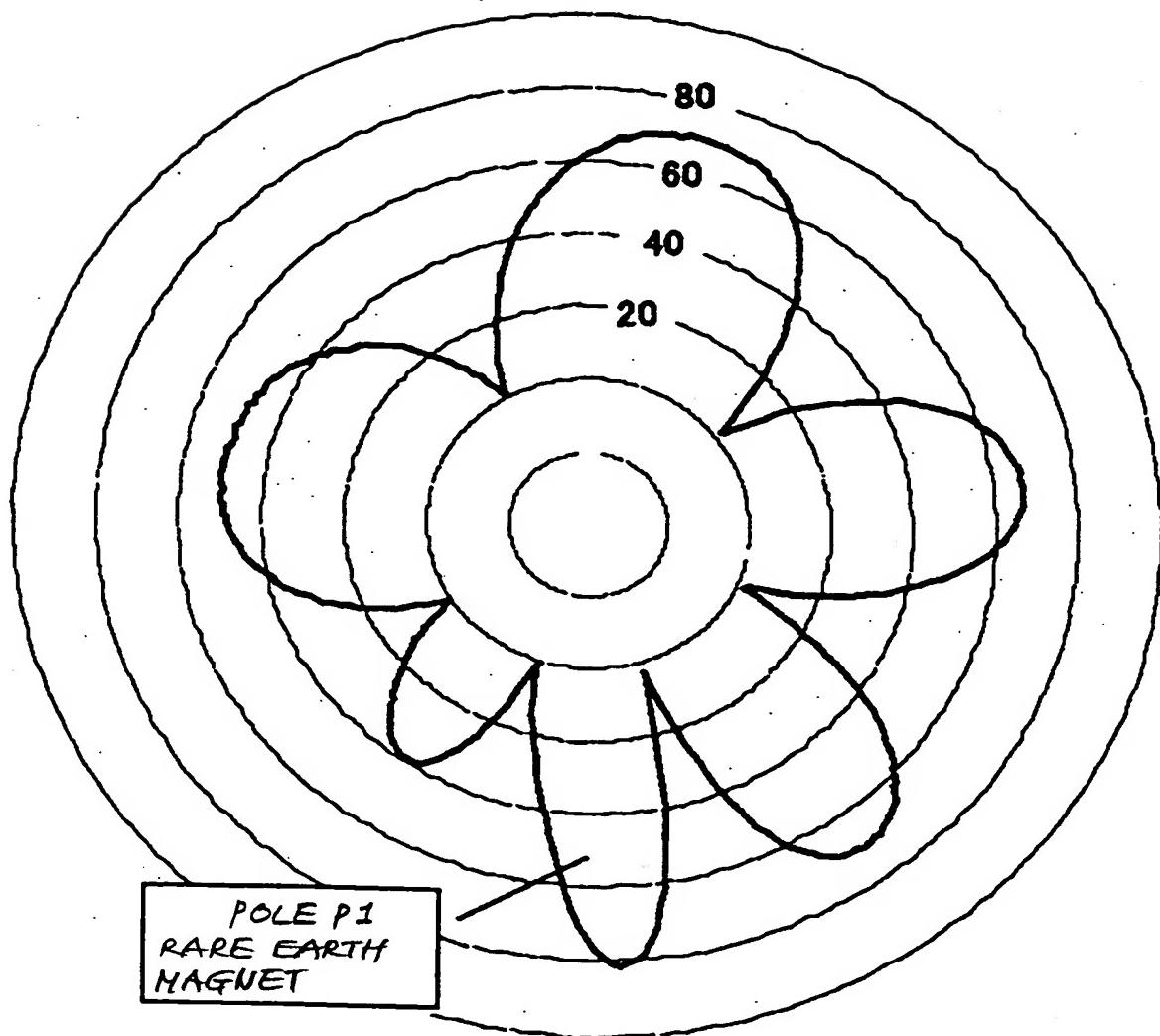


FIG. 14

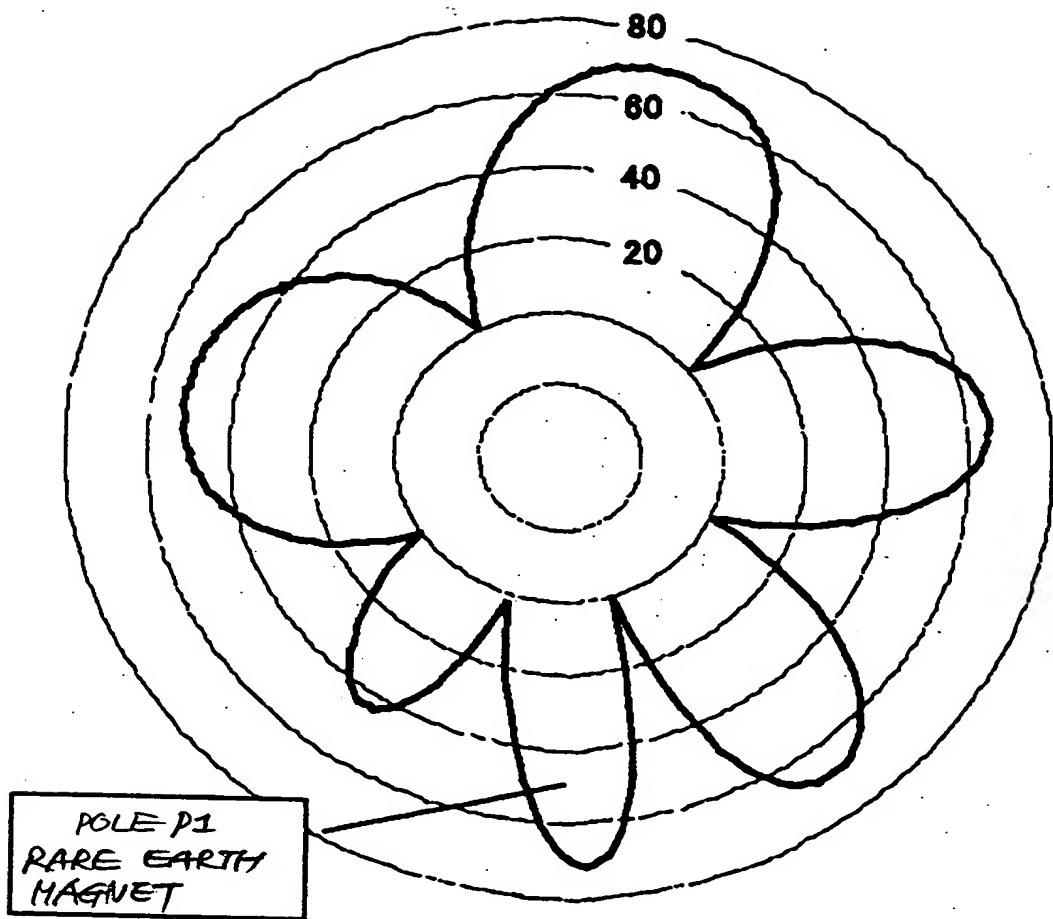


FIG. 15

MATERIAL			HOLDING CONDITIONS			CHARACTERISTICS		
MAGNETIC MATERIAL	BINDER MATERIAL	BINDER CONTENT (wt%)	MAGNETIC FIELD (Oe)	MAGNETIC PRESSURE (tary/cm ²)	BAKING CONDITIONS	DENSITY (g/cm ³)	MAGNETIC FORCE/BH _{max} (mGOe)	STRENGTH (kg/mm ²)
AN/ISO. Nd-Fe-B	EPOXY RESIN/HARDENER	7.0	13,000	5.5	150°C60	5.0	10.2	7.0
AN/ISO. Nd-Fe-B	EPOXY RESIN/HARDENER	7.0	13,000	7.5	150°C60	5.4	11.7	7.3
AN/ISO. Nd-Fe-B	EPOXY RESIN/HARDENER	7.0	13,000	10.5	150°C60	5.9	13.1	7.8
AN/ISO. Nd-Fe-B	TERMOPLASTIC RESIN POWDER & SILICA GRAINS	7.0	13,000	5.5	100°C30	5.1	11.1	3.4
AN/ISO. Nd-Fe-B	TERMOPLASTIC RESIN POWDER & SILICA GRAINS	7.0	13,000	7.5	100°C30	5.5	12.2	3.6
AN/ISO. Nd-Fe-B	TERMOPLASTIC RESIN POWDER & SILICA GRAINS	7.0	13,000	10.5	100°C30	5.9	13.6	3.8
AN/ISO. Nd-Fe-B	FINE GRAINS (THERMOPLASTIC RESIN + CARBON BLACK) & SILICA GRAINS	7.0	13,000	5.5	100°C30	5.4	13.0	3.3
AN/ISO. Nd-Fe-B	FINE GRAINS (THERMOPLASTIC RESIN + CARBON BLACK + CHARGE CONTROL AGENT + WAX) & SILICA GRAINS	7.0	13,000	5.5	100°C30	5.4	13.1	3.3
AN/ISO. Nd-Fe-B	FINE GRAINS (THERMOPLASTIC RESIN + CARBON BLACK + CHARGE CONTROL AGENT + WAX) & SILICA GRAINS	7.0	13,000	7.5	100°C30	5.8	14.9	3.5
AN/ISO. Nd-Fe-B	FINE GRAINS (THERMOPLASTIC RESIN + CARBON BLACK + CHARGE CONTROL AGENT + WAX) & SILICA GRAINS	7.0	13,000	10.5	100°C30	6.1	16.3	3.8
PRIOR ART			INVENTION					

FIG. 16

$(BH)_{max}$ VARIATIONS CAUSED BY DIFFERENT BINDERS

